

Abstract of the Disclosure

A high voltage AC transmission cable system for transmitting power between two points, each connected to one or more power networks, and a method to operate the system. At least one transformer is arranged at each end of the AC transmission cable, wherein at least one of the transformers is arranged to operate the transformer at a voltage whereby losses due to reactive power transport and dielectric losses are minimized. The AC cable is run at a variable voltage regulated such that the voltage is a function of the load for the transmission cable. This operating voltage is not necessarily the same as the nominal voltages in the connection points. A control and communication system and a graphical user interface for carrying out the method are also provided.